

Testimony
Bruce N. Williams

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE) Docket No. 03-2035-02
APPLICATION OF PACIFICORP)
FOR APPROVAL OF ITS) DIRECT TESTIMONY
PROPOSED ELECTRIC RATE) OF BRUCE N. WILLIAMS
SCHEDULES & ELECTRIC)
SERVICE REGULATIONS)
)

MAY 2003

1 **Q. Please state your name, business address and present position with**

2 **PacifiCorp dba Utah Power & Light Company (the Company).**

3 A. My name is Bruce N. Williams. My business address is PacifiCorp, 825 N.E.

4 Multnomah, Portland, Oregon 97232, Suite 1900. I was elected Treasurer by the

5 Board of Directors in February, 2000. Prior to my election as Treasurer, I served

6 as Assistant Treasurer for several years.

7 **Qualifications**

8 **Q. Please briefly describe your education and business experience.**

9 A. I received a Bachelor of Science degree in Business Administration with a

10 concentration in Finance from Oregon State University in June 1980. I also

11 received the Chartered Financial Analyst designation upon passing the

12 examination in September 1986. I have been employed by PacifiCorp for 17

13 years. My business experience has included financing of PacifiCorp's electric

14 operations and non-utility activities, investment management, investor relations

15 and responsibility for certain non-regulated activities.

16 **Q. Please describe your present duties.**

17 I am responsible for the Company's treasury, pension and other investment

18 management activities. In this matter, I am responsible for the preparation of the

19 Company's embedded cost of debt and preferred equity.

20 **Purpose of Testimony**

21 **Q. What is the purpose of your testimony?**

22 A. I will analyze the embedded cost of debt and preferred stock supporting

23 PacifiCorp's electric operations in the State of Utah

1 for the period ending March 31, 2003.

2 **Financing Overview**

3 **Q. How does PacifiCorp finance its electric utility operations?**

4 A. PacifiCorp finances the cash flow requirements of its regulated utility operations
5 utilizing a reasonable mix of debt and equity securities designed to provide a
6 competitive cost of capital and predictable capital market access.

7 **Q. How does PacifiCorp meet its non-common equity financing requirements?**

8 A. PacifiCorp relies on a mix of first mortgage bonds, secured debt, tax exempt debt,
9 unsecured debt and preferred stock to meet its long-term debt and preferred stock
10 financing requirements.

11 The Company has concluded the majority of its long-term financing
12 utilizing secured first mortgage bonds issued under PacifiCorp Mortgage
13 Indenture dated January 9, 1989. As of March 31, 2003, PacifiCorp had \$2,790
14 million of first mortgage bonds outstanding, with an average cost of 7.464% and
15 average maturity of 10.5 years (See Exhibit UP&L (BNW-1)) Presently, all of
16 PacifiCorp's first mortgage bonds bear interest at fixed rates. Proceeds from the
17 issuance of the first mortgage bonds (and other financing instruments) are used to
18 finance the combined utility operation and are not allocated on a divisional or
19 state basis.

20 Prior to the Utah Power & Light and Pacific Power & Light merger in
21 1989, each company had its own first mortgage indentures. Those indentures
22 were assumed by PacifiCorp and, in addition, a new PacifiCorp indenture was
23 established at the time of the merger. In 1996, PacifiCorp restructured the

1 mortgage arrangements, which led to the extinguishment of the Pacific Power and
2 Utah Power mortgages. This action reduced administrative requirements and
3 associated expense and greatly simplified the Company's mortgage financing
4 arrangements.

5 Another important source of financing has been the tax exempt financing
6 associated with certain qualifying equipment at PacifiCorp's power generation
7 plants. Under arrangements with the local counties and other tax-exempt entities,
8 PacifiCorp borrows the proceeds and guarantees the repayment of their long-term
9 debt in order to take advantage of their tax-exempt status in financings. As of
10 March 31, 2003, PacifiCorp's \$736 million tax-exempt portfolio had an average
11 cost of 2.893%, which includes the cost of issuance and credit enhancement.

12 **Calculation Methodologies**

13 **Q. How did you determine the amount of debt and preferred stock to be
14 included in your calculation of the Company's embedded costs of debt and
15 preferred stock?**

16 A. For both debt and preferred stock, I used the rates and amounts outstanding at
17 March 31, 2003.

18 **Q. How did you calculate the Company's embedded costs of long-term debt and
19 preferred stock?**

20 A. I calculated the embedded costs of debt and preferred stock using methodology
21 relied upon in the Company's previous rate cases in Utah and elsewhere.

1 **Q.** **Please explain the cost of debt calculation.**

2 A. I calculated the cost of debt by issue, based on each debt series' interest rate and
3 net proceeds at the issuance date, to produce a bond yield to maturity for each
4 series of debt. It should be noted that in the event a bond was issued to refinance
5 a higher cost bond, the pre-tax premium and unamortized costs, if any, associated
6 with the refinancing were subtracted from the net proceeds of the bonds that were
7 issued. The bond yield was then multiplied by the principal amount outstanding
8 of each debt issue resulting in an annualized cost of each debt issue. Aggregating
9 the annual cost of each debt issue produces the total annualized cost of debt
10 which, when divided by the total principal amount of debt outstanding produces
11 the weighted average cost for all debt issues and is the Company's embedded cost
12 of long-term debt.

13 **Q.** **How did you calculate the embedded cost of preferred stock?**

14 A. The embedded cost of preferred stock was calculated by first determining the cost
15 of money for each issue. This is the result of dividing the annual dividend rate by
16 the per share net proceeds for each series of preferred stock. The cost associated
17 with each series was then multiplied by the stated value or principal amount
18 outstanding for each issue to yield the annualized cost for each issue. The sum of
19 annualized costs for each issue produces the total annual cost for the entire
20 preferred stock portfolio. I then divided the total annual cost by the total amount
21 of preferred stock outstanding to produce the weighted average cost of all issues.
22 This is the Company's embedded cost of preferred stock.

1 **Q. Exhibit UP&L____(BNW-2) includes references to QUIPS. Please briefly**
2 **describe QUIPS.**

3 A. QUIPS (Quarterly Income Preferred Securities) is an acronym for direct or
4 indirect subordinated debt securities sold typically to individual investors.
5 Because of their subordination and interest deferral provisions, the credit rating
6 agencies assign some equity credit for purposes of assessing balance sheet
7 strength. For issuers, the after-tax cost is attractive because, as a debt security, the
8 interest is tax deductible. For your reference, the Company has previously
9 received approval to utilize QUIPS securities from the Public Service
10 Commission of Utah on May 17, 1996 (Docket No. 96-2035-03) and April 25,
11 1997 (Docket No. 97-2035-03).

12 **Q. The footnotes in Exhibit UP&L____(BNW-2) describe that QUIPS amounts**
13 **represented in the calculation are after-tax numbers. Why are these**
14 **securities reflected in the Company's embedded cost of preferred stock?**

15 A. The Company believes that these QUIPS are similar to preferred stock for
16 regulatory accounting purposes, given the equity credit they receive from the
17 major credit rating agencies. Therefore, I have chosen to reflect their cost as part
18 of the Company's embedded cost of preferred stock. Because these securities
19 have debt characteristics, I calculated their embedded costs in the same manner
20 used for each series of debt described above.

1 **Embedded Cost of Long-Term Debt**

2 **Q. What is the Company's embedded cost of long-term debt?**

3 A. Exhibit UP&L____(BNW-1) shows the embedded cost of long-term debt at March
4 31, 2003 at 6.510%.

5 **Embedded Cost of Preferred Stock**

6 **Q. What is the Company's embedded cost of preferred stock?**

7 A. Exhibit UP&L____(BNW-2) shows the embedded cost of preferred stock at March
8 31, 2003 at 5.800%.

9 **Q. Does this conclude your testimony?**

10 A. Yes.

PacifiCorp
Exhibit UP&L ____ (BNW-1)
Docket No. 03-2035-02
Witness: Bruce N. Williams

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

PACIFICORP

Exhibit Accompanying Direct Testimony of Bruce N. Williams
Cost of Long-Term Debt

May 2003

PACIFICORP
Electric Operations
Cost of Long-Term Debt
March 31, 2003

Page 1 of 6

LINE NO.	DESCRIPTION (1)	AMOUNT CURRENTLY OUTSTANDING (2)	ISSUANCE EXPENSES (3)	REDEMPTION EXPENSES (4)	NET PROCEEDS TO COMPANY (5)	ANNUAL DEBT SERVICE COST (6)	COST BY SEGMENT (7)	LINE NO.
1	Subtotal - First Mortgage Bonds	\$1,232,817,000	(\$17,259,828)	(\$4,508,091)	\$1,271,039,081	\$94,025,632	7.273%	1
2								2
3	Subtotal - Medium-Term Notes	\$1,497,476,032	(\$17,202,835)	(\$46,661,539)	\$1,433,611,658	\$114,232,288	7.630%	3
4								4
5	Subtotal - Pollution Control Obligations secured by First Mortgage Bonds	\$287,670,000	(\$8,563,988)	(\$6,391,743)	\$272,142,269	\$8,698,587	3.024%	5
6								6
7	Subtotal - Pollution Control Revenue Bonds	\$448,653,167	(\$6,209,849)	(\$10,779,680)	\$431,663,638	\$12,602,930	2.809%	7
8								8
9	TOTAL LONG-TERM DEBT	\$3,526,616,199	(\$49,246,500)	(\$68,341,053)	\$3,409,028,646	\$229,579,437		9
10								10
11	COST OF LONG-TERM DEBT, bond table basis			6.510%				11
12								12
13								13
14	Footnotes							14
15	(a) Debt assumed in connection with asset purchase from Colorado-Ute. Principal amortizes every October.							15
16	(b) Debt issued in exchange for Wyodak series. Principal amortizes every March and September.							16
17								17
18								18
19								19
20								20

PACIFICORP
 Electric Operations
 Cost of Long-Term Debt
 March 31, 2003

LINE NO.	BOND INTEREST RATE	DESCRIPTION (2)	MATURITY DATE	ORIGINAL LIFE	PRINCIPAL AMOUNT CURRENTLY ISSUE	OUTSTANDING (4)	ISSUANCE EXPENSES (5)	REDEMPTION EXPENSES (6)	NET PROCEEDS TO COMPANY			COST OF MONEY TO COMPANY (BOND TABLE BASIS)	ANNUAL DEBT SERVICE COST (10)	LINE NO.
									TOTAL (8)	DOLLAR AMOUNT (7)	PRINCIPAL AMOUNT (8)			
First Mortgage Bonds														
1	5.650%	Series due November 2006	11/01/06	8	\$200,000,000	\$200,000,000	(\$6,835,966)	\$0	\$193,144,034	96.572%	6,200 %	\$12,400,000	1	
2	6.750%	Series due Apr 2005	04/01/05	12	\$1,50,000,000	\$1,50,000,000	(\$1,373,703)	(\$4,508,091)	\$144,118,206	96.079%	7.245 %	\$10,867,500	2	
3	6.900%	Series due Nov 2011	11/15/11	10	\$50,000,000	\$50,000,000	(\$5,338,849,41)	\$0	\$494,661,151	98.932%	7.051 %	\$35,255,000	3	
4	7.700%	Series due Nov 2031	11/15/31	30	\$300,000,000	\$300,000,000	(\$3,701,309,65)	\$0	\$296,298,690	98.766%	7.807 %	\$23,421,000	4	
5	8.271%	C-U Series due Oct 2010 (a)	10/01/10	18	\$48,972,000	\$29,276,000	\$0	\$0	\$29,276,000	100.000%	8.271 %	\$2,421,418	5	
6	8.978%	C-U Series due Oct 2011 (a)	10/01/11	19	\$4,422,000	\$2,769,000	\$0	\$0	\$2,769,000	100.000%	7.978 %	\$220,911	6	
7	8.493%	C-U Series due Oct 2012 (a)	10/01/12	20	\$19,772,000	\$13,299,000	\$0	\$0	\$13,299,000	100.000%	8.493 %	\$1,129,484	7	
8	8.797%	C-U Series due Oct 2013 (a)	10/01/13	21	\$16,203,000	\$11,477,000	\$0	\$0	\$11,477,000	100.000%	8.797 %	\$1,009,632	8	
9	8.734%	C-U Series due Oct 2014 (a)	10/01/14	22	\$28,218,000	\$20,708,000	\$0	\$0	\$20,708,000	100.000%	8.734 %	\$1,808,637	9	
10	8.294%	C-U Series due Oct 2015 (a)	10/01/15	23	\$46,946,000	\$35,162,000	\$0	\$0	\$35,162,000	100.000%	8.294 %	\$2,916,336	10	
11	8.635%	C-U Series due Oct 2016 (a)	10/01/16	24	\$18,750,000	\$14,571,000	\$0	\$0	\$14,571,000	100.000%	8.635 %	\$1,258,206	11	
12	8.470%	C-U Series due Oct 2017 (a)	10/01/17	25	\$19,609,000	\$15,555,000	\$0	\$0	\$15,555,000	100.000%	8.470 %	\$1,317,509	12	
13	7.047%	Subtotal - First Mortgage Bonds			\$1,292,817,000	(\$17,269,828)	(\$4,508,091)		\$1,271,039,081			\$94,025,632	13	

(a) Principal amortizes every October.

PACIFICORP
Electric Operations
Cost of Long-Term Debt
March 31, 2003

LINE NO.	BOND INTEREST RATE	DESCRIPTION	MATURITY DATE	ORIGINAL LIFE	PRINCIPAL AMOUNT		ISSUANCE EXPENSES	REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY		MONEY TO COMPANY (BOND TABLE BASIS)
					(3)	(4)			(7)	(8)	
Series CMNS											
1	9.000%	Series C due Sep 2003 (b)	09/01/03	12	\$5,226,000	\$2,252,032	(\$2,584)	(\$69,069)	\$2,180,379	96.818%	9.449%
2	7.670%	Series C due Jan 2007	01/10/07	15	\$5,724,000	\$5,724,000	(\$36,625)	(\$783,776)	\$4,903,598	85.667%	9.480%
3	9.150%	Series C due Aug 2011	08/09/11	20	\$8,000,000	\$8,000,000	(\$75,327)	\$0	\$7,924,673	99.058%	9.254%
4	8.950%	Series C due Sep 2011	09/01/11	20	\$20,000,000	\$20,000,000	(\$32,118)	\$0	\$19,867,882	99.339%	9.022%
5	8.920%	Series C due Sep 2011	09/01/11	20	\$20,000,000	\$20,000,000	(\$18,318)	\$0	\$19,811,682	99.038%	9.023%
6	8.950%	Series C due Sep 2011	09/01/11	20	\$25,000,000	\$25,000,000	(\$75,398)	\$0	\$24,824,602	99.298%	9.026%
7	8.290%	Series C due Dec 2011	12/30/11	20	\$3,000,000	\$3,000,000	(\$23,040)	(\$410,784)	\$2,566,175	95.539%	9.972%
8	8.260%	Series C due Jan 2012	01/10/12	20	\$1,000,000	\$1,000,000	(\$7,649)	(\$136,928)	\$85,542	9.938%	9.938%
9	8.280%	Series C due Jan 2012	01/10/12	20	\$2,000,000	\$2,000,000	(\$15,297)	(\$273,856)	\$1,712,847	95.642%	9.947%
10	8.250%	Series C due Feb 2012	02/01/12	20	\$3,000,000	\$3,000,000	(\$22,946)	(\$410,784)	\$2,566,270	85.542%	9.927%
11	8.530%	Series C due Dec 2021	12/16/21	30	\$15,000,000	\$15,000,000	(\$115,202)	(\$2,053,922)	\$12,830,877	85.539%	10.066%
12	8.375%	Series C due Dec 2021	12/31/21	30	\$5,000,000	\$5,000,000	(\$38,400)	(\$3684,641)	\$4,276,959	85.539%	9.889%
13	8.260%	Series C due Jan 2022	01/07/22	30	\$5,000,000	\$5,000,000	(\$33,243)	(\$3684,641)	\$4,282,117	85.642%	9.745%
14	8.270%	Series C due Jan 2022	01/10/22	30	\$4,000,000	\$4,000,000	(\$36,594)	(\$547,712)	\$3,421,693	85.542%	9.768%
15	Sub-Total Series C				\$118,976,032	(\$89,742)	(\$6,056,113)	(\$112,025,177)	\$390,720	9.768%	\$11,138,860
16	Sub-Total Series CMNS										
17	Sub-Total Series CMNS										
18	Series DMNS										
19	7.850%	Series D due Feb 2004	02/16/04	12	\$2,500,000	\$2,500,000	(\$21,110)	(\$342,320)	\$2,136,570	85.463%	9.963%
20	7.750%	Series D due Feb 2004	02/16/04	12	\$3,000,000	\$3,000,000	(\$23,332)	(\$151,120)	\$2,823,548	85.543%	9.944%
21	7.790%	Series D due Feb 2004	02/16/04	12	\$6,000,000	\$6,000,000	(\$50,664)	(\$302,241)	\$5,647,095	94.118%	94.118%
22	7.810%	Series D due Feb 2004	02/16/04	12	\$20,000,000	\$20,000,000	(\$168,880)	(\$2,585,447)	\$17,245,673	86.228%	86.228%
23	Sub-Total Series D				\$31,500,000	(\$265,986)	(\$3,381,128)	(\$27,852,886)			
24	Sub-Total Series DMNS										
25	Series EMNS										
26	7.030%	Series E due Oct 2003	10/15/03	11	\$5,000,000	\$5,000,000	(\$33,788)	(\$335,843)	\$4,630,369	92.607%	8.056%
27	7.270%	Series E due Oct 2003	10/21/03	11	\$2,000,000	\$2,000,000	(\$13,515)	(\$134,337)	\$1,832,147	92.607%	8.308%
28	7.390%	Series E due Oct 2003	10/21/03	11	\$5,000,000	\$5,000,000	(\$33,788)	(\$335,843)	\$4,630,369	92.607%	8.434%
29	7.300%	Series E due Oct 2003	10/22/03	11	\$2,000,000	\$2,000,000	(\$13,515)	(\$134,337)	\$1,852,147	92.607%	8.340%
30	7.320%	Series E due Sep 2004	09/03/04	12	\$7,500,000	\$7,500,000	(\$36,361)	(\$367,801)	\$7,065,838	94.211%	8.083%
31	7.110%	Series E due Sep 2004	09/24/04	12	\$6,500,000	\$6,500,000	(\$48,846)	(\$734,745)	\$5,716,409	87.945%	8.753%
32	7.660%	Series E due Oct 2004	10/22/04	12	\$5,000,000	\$5,000,000	(\$32,745)	(\$335,843)	\$4,631,411	92.628%	8.660%
33	7.300%	Series E due Oct 2004	10/22/04	12	\$10,000,000	\$10,000,000	(\$67,576)	(\$671,687)	\$9,260,737	92.607%	8.284%
34	7.300%	Series E due Oct 2004	10/22/04	12	\$10,000,000	\$10,000,000	(\$67,576)	(\$671,687)	\$9,260,737	92.607%	8.284%
35	7.530%	Series E due Oct 2004	10/26/04	12	\$750,000	\$750,000	(\$30,377)	(\$694,555)	\$694,555	92.607%	8.526%
36	7.710%	Series E due Oct 2004	10/27/04	12	\$3,000,000	\$3,000,000	(\$20,273)	(\$201,506)	\$2,778,221	92.607%	8.716%
37	7.710%	Series E due Oct 2004	10/27/04	12	\$3,250,000	\$3,250,000	(\$21,962)	(\$218,298)	\$3,009,740	92.607%	8.716%
38	7.600%	Series E due Nov 2004	11/01/04	12	\$1,000,000	\$1,000,000	(\$6,549)	(\$67,169)	\$926,282	82.628%	8.597%
39	7.720%	Series E due Nov 2004	11/02/04	12	\$1,500,000	\$1,500,000	(\$9,824)	(\$100,753)	\$1,389,423	92.628%	8.723%
40	7.430%	Series E due Jan 2005	01/24/05	12	\$1,000,000	\$1,000,000	(\$6,333)	(\$67,169)	\$926,499	92.650%	8.415%
41	7.430%	Series E due Jan 2005	01/24/05	12	\$2,500,000	\$2,500,000	(\$15,822)	(\$167,922)	\$2,316,247	92.650%	8.415%
42	7.340%	Series E due Oct 2005	10/17/05	13	\$5,000,000	\$5,000,000	(\$33,788)	(\$335,843)	\$4,630,369	92.607%	8.279%
43	7.360%	Series E due Oct 2005	10/17/05	13	\$5,000,000	\$5,000,000	(\$33,788)	(\$335,843)	\$4,630,369	92.607%	8.300%
44	7.430%	Series E due Sep 2007	09/11/07	15	\$2,000,000	\$2,000,000	(\$15,530)	(\$226,075)	\$1,758,395	87.920%	8.905%
45	7.220%	Series E due Sep 2007	09/18/07	15	\$2,500,000	\$2,500,000	(\$19,412)	(\$282,594)	\$2,197,994	87.920%	8.675%

PACIFICORP
Electric Operations
Cost of Long-Term Debt
March 31, 2003

LINE NO.	BOND RATE	INTEREST RATE	DESCRIPTION	MATURITY DATE	ORIGINAL ISSUE LIFE	PRINCIPAL AMOUNT CURRENTLY OUTSTANDING	ISSUANCE EXPENSES	REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY		MONEY TO COMPANY (BOND TABLE BASIS)
									(1)	(2)	
46	7.270%	Series E due Sep 2007	09/24/07	15	\$4,000,000	\$4,000,000	(\$31,059)	(\$452,151)	\$3,516,790	87.920%	8.730%
47	8.130%	Series E due Jan 2013	01/22/13	20	\$10,000,000	\$10,000,000	(\$75,827)	(\$671,687)	\$9,252,486	92.525%	8.939%
48	8.050%	Series B due Sep 2022	09/01/22	30	\$15,000,000	\$15,000,000	(\$131,471)	(\$1,695,566)	\$13,172,963	9.258%	9.280%
49	8.070%	Series E due Sep 2022	09/09/22	30	\$8,000,000	\$8,000,000	(\$70,118)	(\$904,302)	\$7,025,580	9.280%	9.280%
50	8.110%	Series E due Sep 2022	09/09/22	30	\$12,000,000	\$12,000,000	(\$105,177)	(\$1,356,453)	\$10,538,370	9.325%	1.119,000
51	8.120%	Series E due Sep 2022	09/09/22	30	\$30,000,000	\$30,000,000	(\$43,909,875)	(\$5,651,887)	\$43,909,875	9.336%	\$4,668,000
52	8.050%	Series E due Sep 2022	09/14/22	30	\$10,000,000	\$10,000,000	(\$38,648)	(\$1,130,377)	\$8,781,975	87.820%	9.258%
53	8.080%	Series E due Oct 2022	10/14/22	30	\$25,000,000	\$25,000,000	(\$200,190)	(\$2,061,627)	\$22,758,182	90,953%	\$2,238,250
54	8.080%	Series E due Oct 2022	10/14/22	30	\$26,000,000	\$26,000,000	(\$2,938,981)	(\$2,938,981)	\$22,852,821	9.283%	\$2,413,580
55	8.230%	Series E due Jan 2023	01/20/23	30	\$4,000,000	\$4,000,000	(\$51,229)	(\$88,989)	\$3,962,241	99.036%	8.316%
56	8.230%	Series E due Jan 2023	01/20/23	30	\$5,000,000	\$5,000,000	(\$37,914)	(\$335,843)	\$4,626,243	92.525%	\$332,640
57		Sub-Total Series E			\$249,500,000	\$1,890,681	(\$23,073,537)	(\$224,555,782)	\$22,285,410	56	\$447,550
58		Sub-Total Series F								57	
59		Series F M1N's								58	
60	6.310%	Series F due Jul 2003	07/28/03	10	\$1,000,000	\$1,000,000	(\$7,897)	(\$53,551)	\$938,552	93.855%	7.182%
61	6.340%	Series F due Jul 2003	07/28/03	10	\$2,000,000	\$2,000,000	(\$15,795)	(\$107,102)	\$1,877,103	92.855%	7.213%
62	6.340%	Series F due Jul 2003	07/28/03	10	\$2,000,000	\$2,000,000	(\$15,795)	(\$107,102)	\$1,877,103	93.855%	7.213%
63	6.340%	Series F due Jul 2003	07/28/03	10	\$4,000,000	\$4,000,000	(\$31,590)	(\$214,204)	\$3,754,206	93.855%	7.213%
64	6.310%	Series F due Jul 2003	07/28/03	10	\$6,000,000	\$6,000,000	(\$47,385)	(\$321,307)	\$5,631,308	93.855%	7.182%
65	6.340%	Series F due Jul 2003	07/28/03	10	\$10,000,000	\$10,000,000	(\$78,974)	(\$535,515)	\$9,385,515	93.855%	7.213%
66	6.310%	Series F due Jul 2003	07/28/03	10	\$18,000,000	\$18,000,000	(\$142,154)	(\$963,920)	\$16,893,926	93.855%	7.182%
67	6.310%	Series F due Jul 2003	07/28/03	10	\$18,000,000	\$18,000,000	(\$142,154)	(\$963,920)	\$16,893,926	93.855%	7.182%
68	6.340%	Series F due Jul 2003	07/28/03	10	\$19,000,000	\$19,000,000	(\$150,051)	(\$1,017,471)	\$17,892,478	93.855%	7.213%
69	7.250%	Series F due Aug 2013	08/01/13	20	\$10,000,000	\$10,000,000	(\$91,474)	(\$535,511)	\$9,373,015	93.730%	7.878%
70	7.250%	Series F due Aug 2013	08/01/13	20	\$10,000,000	\$10,000,000	(\$91,474)	(\$535,511)	\$9,373,015	93.730%	7.878%
71	7.250%	Series F due Aug 2013	08/01/13	20	\$10,000,000	\$10,000,000	(\$91,474)	(\$535,511)	\$9,373,015	93.730%	7.878%
72	7.250%	Series F due Aug 2013	08/01/13	20	\$10,000,000	\$10,000,000	(\$91,474)	(\$535,511)	\$9,373,015	93.730%	7.878%
73	7.260%	Series F due Jul 2023	07/21/23	30	\$11,000,000	\$11,000,000	(\$100,622)	(\$589,062)	\$10,310,316	99.235%	7.952%
74	7.260%	Series F due Jul 2023	07/21/23	30	\$27,000,000	\$27,000,000	(\$246,981)	(\$1,445,880)	\$25,307,139	99.235%	7.952%
75	7.400%	Series F due Jul 2023	07/28/23	30	\$2,000,000	\$2,000,000	(\$18,295)	(\$107,102)	\$1,874,603	99.235%	7.952%
76	7.370%	Series F due Aug 2023	08/11/23	30	\$15,500,000	\$15,500,000	(\$141,783)	(\$830,042)	\$14,528,173	99.235%	7.952%
77	7.230%	Series F due Aug 2023	08/16/23	30	\$15,000,000	\$15,000,000	(\$137,211)	(\$268,624)	\$14,594,165	97.294%	7.457%
78	7.240%	Series F due Aug 2023	08/16/23	30	\$30,000,000	\$30,000,000	(\$274,423)	(\$337,248)	\$29,188,329	97.294%	7.467%
79	6.750%	Series F due Sep 2023	09/14/23	30	\$2,000,000	\$2,000,000	(\$15,300)	\$0	\$1,984,700	6.810%	6.810%
80	6.720%	Series F due Sep 2023	09/14/23	30	\$2,000,000	\$2,000,000	(\$15,300)	\$0	\$1,984,700	6.810%	6.810%
81	6.750%	Series F due Sep 2023	09/14/23	30	\$5,000,000	\$5,000,000	(\$38,250)	(\$34,169)	\$4,927,581	98.552%	6.815%
82	6.750%	Series F due Oct 2023	10/26/23	30	\$12,000,000	\$12,000,000	(\$91,396)	\$0	\$11,908,604	99.238%	6.810%
83	6.750%	Series F due Aug 2023	08/16/23	30	\$16,000,000	\$16,000,000	(\$121,861)	\$0	\$15,878,139	99.238%	6.810%
84	6.750%	Series F due Oct 2023	10/26/23	30	\$20,000,000	\$20,000,000	(\$152,326)	\$0	\$19,847,674	99.238%	6.810%
85	8.625%	Series F due Dec 2024	12/13/24	30	\$20,000,000	\$20,000,000	(\$649,625)	\$0	\$19,350,375	96.752%	8.938%
86		Sub-Total Series F			\$297,500,000	(\$3,001,066)	(\$1,238,259)	(\$284,260,675)			
87											

PACIFICORP
Electric Operations
Cost of Long-Term Debt
March 31, 2003

LINE NO.	BOND INTEREST RATE	DESCRIPTION	MATURITY DATE	ORIGINAL ISSUE DATE	PRINCIPAL AMOUNT		ISSUANCE EXPENSES	REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY		MONEY TO COMPANY (BOND TABLE BASIS)
					CURRENTLY OUTSTANDING	AMOUNT			TOTAL DOLLAR AMOUNT	PER \$100 PRINCIPAL AMOUNT	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
88											
89	6.120%	Series G due Jan 2006	01/15/06	10	\$100,000,000	\$100,000,000	(\$679,467)	(\$3,030,806)	\$96,289,728	96.290%	6.633%
90	6.625%	Series G due Jun 2007	06/01/07	12	\$100,000,000	\$100,000,000	(\$1,897,428)	(\$881,696)	\$97,220,876	97.221%	6.971%
91	6.710%	Series G due Jan 2026	01/15/26	30	\$100,000,000	\$100,000,000	(\$504,467)	\$0	\$99,095,533	99.096%	6.781%
92		Sub-Total Series G				\$200,000,000	(\$3,481,361)	(\$3,912,502)	\$292,606,137		
93											
94											
95	6.750%	Series H due Jul 2004	07/15/04	7	\$175,000,000	\$175,000,000	(\$3,180,666)	\$0	\$171,819,334	98.182%	7.084%
96	6.375%	Series H due May 2008	05/15/08	10	\$200,000,000	\$200,000,000	(\$2,060,179)	\$0	\$197,939,821	98.970%	6.517%
97	7.000%	Series H due Jul 2009	07/15/09	12	\$125,000,000	\$125,000,000	(\$2,428,154)	\$0	\$122,571,846	98.037%	7.245%
98		Sub-Total Series H				\$500,000,000	(\$7,668,999)	\$0	\$492,331,001		
99											
100		Preferred Unsecured Debt Solicitation Costs									
101											
102											

(b) Principal amortizes every March and September.

Page 5 of 6

PACIFICORP
Electric Operations
Cost of Long-Term Debt
March 31, 2003

LINE NO.	BOND RATE	DESCRIPTION (2)	ISSUE DATE	MATURITY DATE	ORIGINAL LIFE	PRINCIPAL AMOUNT (4)	CURRENTLY OUTSTANDING (5)	ISSUANCE EXPENSES (6)	REDEMPTION EXPENSES (7)	NET PROCEEDS TO COMPANY TOTAL DOLLAR AMOUNT (8)	COST OF MONEY TO COMPANY (BOND TABLE BASIS)	ANNUAL DEBT LINE SERVICE COST (10)
SECURED POLLUTION CONTROL REVENUE BONDS												
1	5.650%	Emery County due Nov 2023	11/15/93	11/01/23	30	\$46,500,000	\$46,500,000	\$1,640,000	(\$2,842,033)	\$42,033,154	90.394%	6.372%
2	5.625%	Emery County due Nov 2023	11/15/93	11/01/23	30	\$16,400,000	\$16,400,000	\$1,015,031	(\$819,557)	\$14,565,392	88.813%	6.475%
3	5.625%	Laclede County due Nov 2021	11/15/93	11/01/21	28	\$8,300,000	\$8,300,000	\$426,105	(\$44,778)	\$7,459,117	89.869%	6.408%
4	5.150%	Carson County due Nov 2024	11/17/94	11/01/24	30	\$9,365,000	\$9,365,000	\$206,519	(\$38,574)	\$9,059,907	97.169%	1.690%
5	5.1300%	Converse County due Nov 2024	11/17/94	11/01/24	30	\$8,190,000	\$8,190,000	\$209,770	(\$86,323)	\$7,893,859	96.382%	1.877%
6	5.1200%	Emery County due Nov 2024	11/17/94	11/01/24	30	\$121,940,000	\$121,940,000	\$3,274,246	(\$1,925,767)	\$116,739,987	95.736%	2.008%
7	5.1300%	Lincoln County due Nov 2024	11/17/94	11/01/24	30	\$15,060,000	\$15,060,000	\$422,838	(\$81,427)	\$14,555,715	96.651%	1.950%
8	5.150%	Moffat County due May 2013	11/17/94	05/01/13	19	\$40,655,000	\$40,655,000	\$874,159	(\$74,912)	\$39,705,929	97.666%	1.712%
9	5.1300%	Sweetwater County due Nov 2024	11/17/94	11/01/24	30	\$21,260,000	\$21,260,000	\$510,479	(\$38,332)	\$20,661,169	97.183%	1.842%
10	5.206%	Total - Secured Pollution Control Revenue Bonds				\$287,670,000	\$287,670,000	(\$8,563,988)	(\$6,391,743)	\$272,714,269	91.609	9
11											\$8,608,587	10
UNSECURED POLLUTION CONTROL REVENUE BONDS												
12	1.200%	Sweetwater 88B due Jan 2014	01/01/88	01/01/14	30	\$11,500,000	\$11,500,000	(\$84,822)	(\$392,250)	\$11,022,928	95.852%	2.117%
13	2.700%	Converse 86 due Jan 2014	01/01/88	01/01/14	30	\$17,000,000	\$17,000,000	(\$155,970)	(\$579,849)	\$16,264,181	95.672%	3.165%
14	2.650%	Sweetwater 84C due Dec 2014	12/12/84	12/01/14	30	\$15,000,000	\$15,000,000	(\$227,887)	\$14,772,113	98.481%	2.327%	
15	2.150%	Sweetwater 90A due Jul 2015	07/12/90	07/01/15	25	\$70,000,000	\$70,000,000	(\$60,750)	(\$735,122)	\$92,920%	2.806%	
16	2.150%	Sweetwater 90A due Jul 2015	01/17/91	01/01/16	25	\$45,000,000	\$45,000,000	(\$771,836)	(\$2,578,602)	\$41,649,362	92.555%	3.425%
17	2.650%	Lincoln 91 due Jan 2016	03/22/91	01/01/16	25	\$45,000,000	\$45,000,000	(\$872,505)	(\$2,568,639)	\$41,558,636	92.333%	2.423%
18	2.1200%	Emery 91 due Jan 2015	12/29/86	12/01/16	30	\$8,500,000	\$8,500,000	(\$304,824)	\$0	\$8,195,176	96.414%	2.732%
19	2.300%	Forsyth 86A due Dec 2016	01/01/88	01/01/17	30	\$50,000,000	\$50,000,000	(\$422,443)	(\$882,101)	\$48,692,456	97.391%	2.116%
20	2.087%	Sweetwater 88A due Jan 2017	01/01/88	01/01/18	30	\$45,000,000	\$45,000,000	(\$380,198)	(\$1,013,235)	\$43,605,519	96.903%	2.197%
21	2.200%	Forsyth 88B due Jan 2018	01/01/88	01/01/18	30	\$63,000,000	\$63,000,000	(\$351,905)	(\$1,006,013)	\$62,948,082	96.704%	2.971%
22	2.200%	Gillette 88 due Jan 2018	09/29/92	07/01/06	14	\$22,485,000	\$22,485,000	(\$194,271)	(\$303,303)	\$21,987,426	97.787%	3.237%
23	2.859%	Converse 92 due Jul 2006	09/29/92	04/01/05	13	\$9,335,000	\$9,335,000	(\$147,642)	(\$134,094)	\$9,053,264	96.982%	3.326%
24	2.850%	Sweetwater 92A due Apr 2005	09/29/92	12/01/05	13	\$6,305,000	\$6,305,000	(\$138,478)	(\$97,735)	\$6,068,787	96.254%	3.397%
25	2.850%	Sweetwater 92B due Dec 2005	11/17/94	11/01/23	30	\$5,300,000	\$5,300,000	(\$132,043)	\$0	\$5,167,357	97.509%	2.775%
26	2.403%	Converse 96 due Nov 2025	01/01/88	11/01/25	30	\$22,000,000	\$19,953,167	(\$404,262)	\$0	\$19,546,906	97.974%	2.842%
27	2.400%	Lincoln 95 due Nov 2025	11/17/95	11/01/25	30	\$24,400,000	\$24,400,000	(\$225,000)	(\$428,469)	\$23,746,331	97.322%	2.087%
28	2.1200%	Sweetwater 95 due Nov 2025	09/30/90	09/30/30	34	\$12,675,000	\$12,675,000	(\$735,013)	\$0	\$11,939,987	94.201%	6.579%
29	6.150%	Emery 96 due Sep 2030				\$472,500,000	\$472,500,000	(\$6,209,449)	(\$6,391,663)	\$431,663,638	\$833,888	30
30	2.028%	Total - Unsecured Pollution Control Revenue Bonds									\$12,602,950	31
31												32
32												33
33												34
34												35

(a) Subject to Alternative Minimum Tax.
 Annual Debt Service (column 10) includes remarketing fees and credit enhancement fees.
 (b) Currently outstanding amounts are shown net of construction fund balances.

Exhibit
UPL_ (BNW-2)

PacifiCorp
Exhibit UP&L ____ (BNW-2)
Docket No. 03-2035-02
Witness: Bruce N. Williams

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

PACIFICORP

Exhibit Accompanying Direct Testimony of Bruce N. Williams
Cost of Preferred Stock

May 2003

PACIFIC CORP
Electric Operations
Cost of Preferred Stock
March 31, 2003

Line No.	Description of Issue	Issuance Date	Shares Issued and Outstanding	Total Book Value	Net Premium and (Expense)	Net Proceeds to Company	Annual Dividend Requirement	Cost of Money to Company	Annualized Cost	Line No.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	5% Preferred Stock, \$100 Par Value	(a)	126,243	\$12,624,300	(\$98,049)	\$12,526,251	\$631,215	5.04%	636,156	1
2	Serial Preferred, \$100 Par Value									2
3	4.52% Series	Nov-55	2,065	\$206,500	(\$9,676)	\$196,824	\$9,334	4.74%	9,793	4
4	7.00% Series	(b)	18,046	\$1,804,600	(c)	\$1,804,600	\$126,322	7.00%	126,322	5
5	6.00% Series	(b)	5,920	\$593,000	(c)	\$593,000	\$35,580	6.00%	35,580	6
6	5.00% Series	(b)	41,908	\$4,190,800	(c)	\$4,190,800	\$209,540	5.00%	209,540	7
7	5.40% Series	(b)	65,959	\$6,595,900	(c)	\$6,595,900	\$336,179	5.40%	336,179	8
8	4.72% Series	Aug-63	69,890	\$6,989,000	(\$30,349)	\$6,988,651	\$329,881	4.74%	331,320	9
9	4.56% Series	Feb-65	84,592	\$8,459,200	(\$49,071)	\$8,410,129	\$385,740	4.59%	387,990	10
10										11
11	No Par Serial Preferred, \$25 Stated Value									12
12	8.25% Series A QUIDS (e)	Jun-96	8,680,000	\$217,000,000	(9,295,640)	\$207,704,360	\$11,278,575	5.64%	12,242,696	13
13	7.70% Series B QUIDS (f)	Aug-97	5,400,000	\$135,900,000	(2,889,612)	\$132,110,388	\$6,548,850	5.24%	7,068,872	14
14	Unamortized expense (g)									15
15	Unamortized expense (h)									16
16		1995								17
17	No Par Serial Preferred, \$100 Stated Value									18
18	\$7.48 Series (d)	Jun-92	675,000	67,500,000	(\$756,389)	\$66,743,611	\$5,049,000	7.67%	5,179,384	20
19										21
20										22
21										23
22										24
23										25
24										26
25										27
26										28
27										29
28	(a) Issue replaced 6% and 7% preferred stock of Pacific Power & Light Company and Northwestern Electric Company									30
29	and 5% preferred stock of Mountain States Power Company, most of which sold in the 1920's and 1930's.									31
30	(b) These issues replaced an issue of The California Oregon Power Company as a result of the merger of that Company into Pacific Power & Light Co.									32
31	(c) Original issue expense/premium has been fully amortized or expensed.									33
32	(d) Annual 5% sinking fund begins June 15, 2002.									34
33	(e) Columns 6, 8, 9, and 10 are after-tax numbers. The after-tax coupon of the QUIDS Series A is 5.198% assuming a 37% tax rate.									35
34	(f) Columns 6, 8, 9, and 10 are after-tax numbers. The after-tax coupon of the QUIDS Series B is 4.851% assuming a 37% tax rate.									36
35	(g) Column 10 is the after-tax annual unamortized debt expense related to the 8.38% QUIDS redeemed November 2000 assuming a 37% tax rate.									37
36	(h) Column 10 is the after-tax annual unamortized debt expense related to the 8.55% QUIDS redeemed November 2000.									38
37										38
38										

Cost of Preferred Stock = 5.800%